

# Japanese Beetle Eradication

The Japanese beetle is one of the two most destructive insects in the U.S.



# Japanese Beetle Eradication

This is a once-in-a-lifetime opportunity to protect our property from the destructive Japanese beetle.





# Insect Emergency

- The destructive Japanese beetle is a statewide threat.
- It impacts our ability to grow gardens, enjoy our private property and our quality of life.
- It threatens Utah's \$125 million fruit, vegetable and greenhouse nursery industry.
- The estimated consumer cost to control JB is \$500,000/year (Orem treatment area).
- This is an insect that will eventually affect every Utahn if it is not stopped now.



# Japanese Beetle Eradication



# Japanese Beetle Eradication



UGA0176076

UGA0177037



# Background

- July 2006 - Japanese beetle found in Orem City.
- July to August 2006 - Extensive trapping to discover extent of the beetles
- September 2006 - Generated maps of the beetle population and plan treatments

UDAF placed 100 traps and caught 695 beetles.





# Background

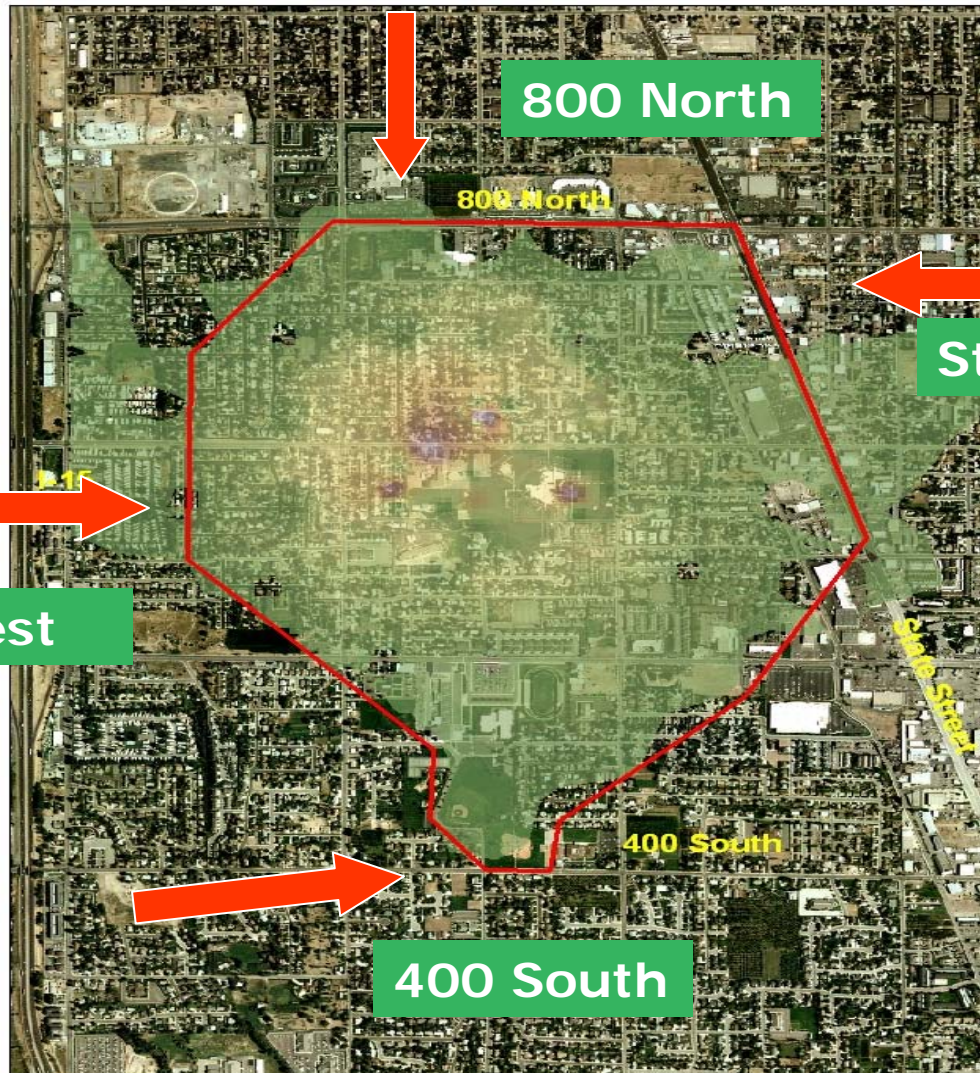
- March 2007 15, 20, and 22 – Neighborhood meetings
- March – May – Permission slip signing and public outreach
- Mid-June – Ground treatment in designated ground treatment area
- Late June – Early July – Two treatments to green plants and trees in the designated plant and tree treatment area.



# Discovery

Discovery  
area -  
Central Orem  
800 North,  
State Street,  
400 South,  
I-15

1000 West



This area is  
small enough  
that we think  
we can kill all  
of the beetle.

National  
perspective.

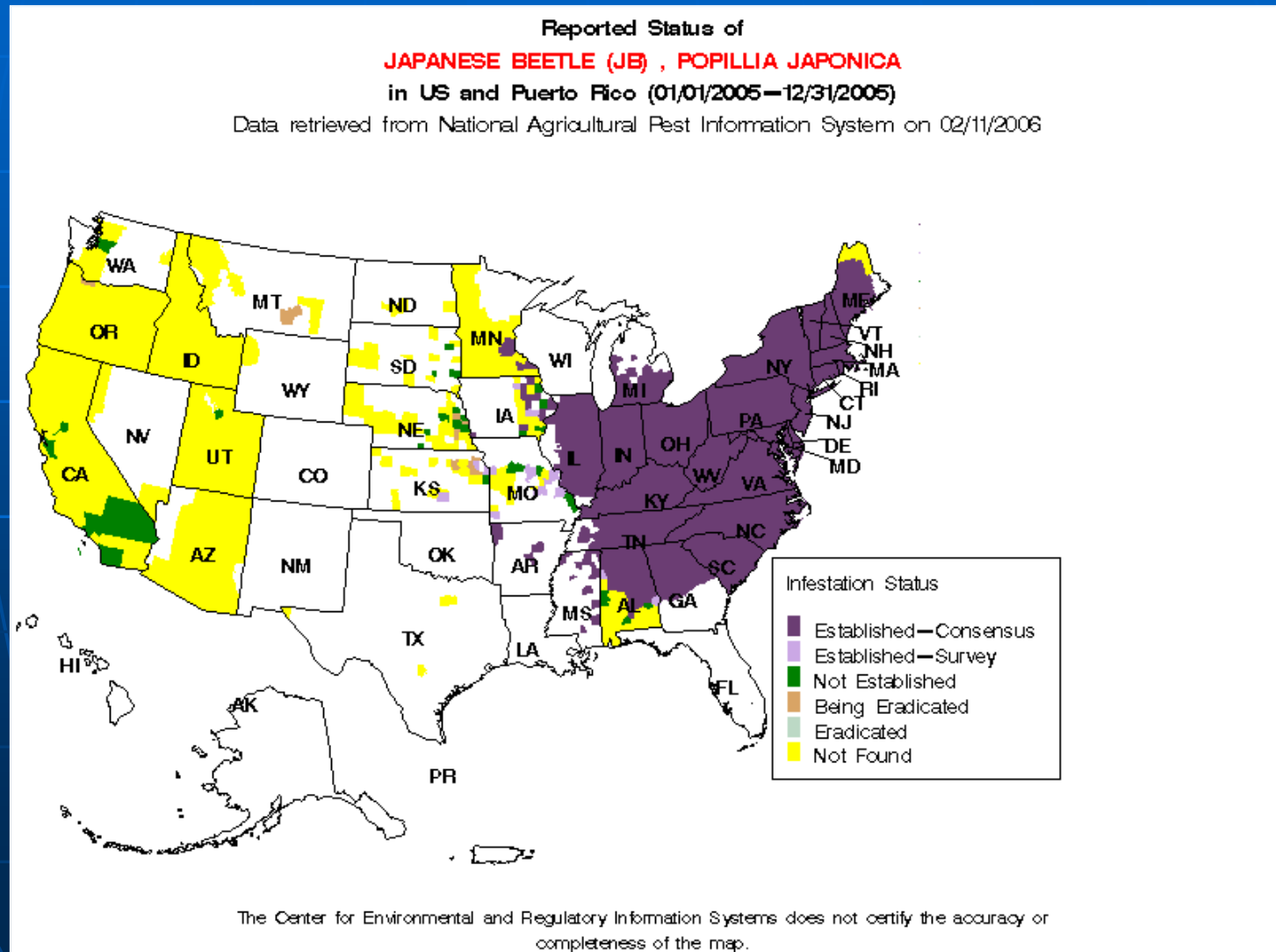


# Distribution

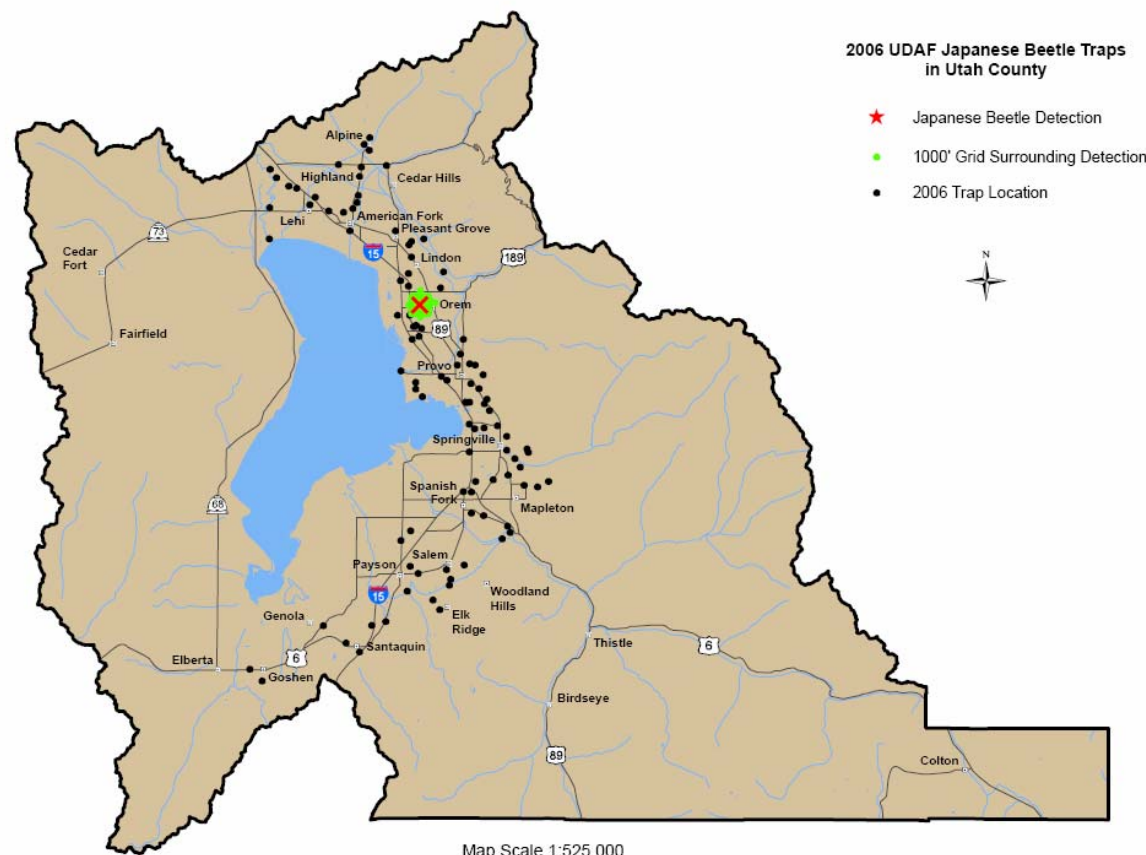
If we are not successful, the beetle will grow in population and spread throughout the state.

Results:

- Ongoing loss of tree and plant life.
- Quarantine of nursery and agricultural products.



# Distribution



Map Scale 1:525,000  
1 inch = 8.3 miles



# Distribution



● Trap location

Code	Acres
1	294.18
2	221.14
3	86.68
4	68.71
5	46.42
6	42.46
7	38.94
8	22.31
9	15.08
10	9.48
11	12.14
12	12.42
13	7.88
14	7.10
15	4.87
16	5.23
17	3.70
18	3.93
19	2.00
20	2.42
21	1.90
22	1.16
23	0.63
24	0.74
25	0.74
26	0.74
27	0.63
28	0.84
29	0.63
30	0.42
31	0.11
32	0.21
124	0.11

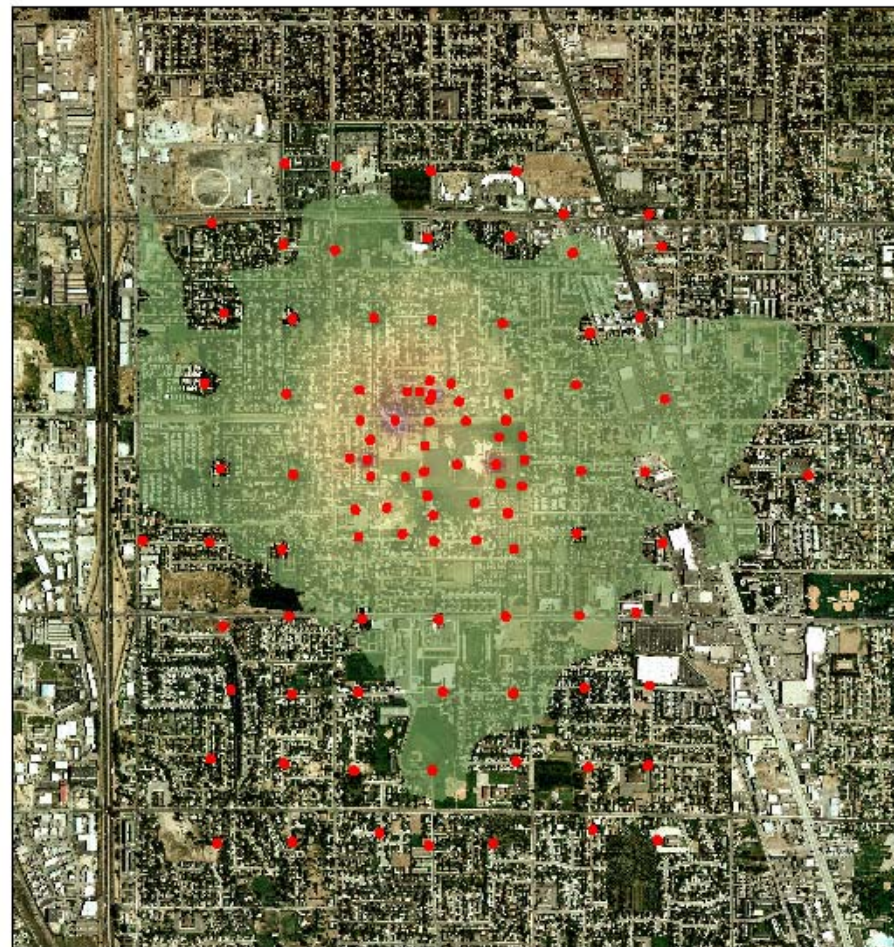
Total area 915.95 acres



Map scale 1:75,000 (1 inch = 1.2 miles)



# Distribution



● Trap location

Code Acres

1	294.18
2	221.14
3	86.68
4	68.71
5	46.42
6	42.46
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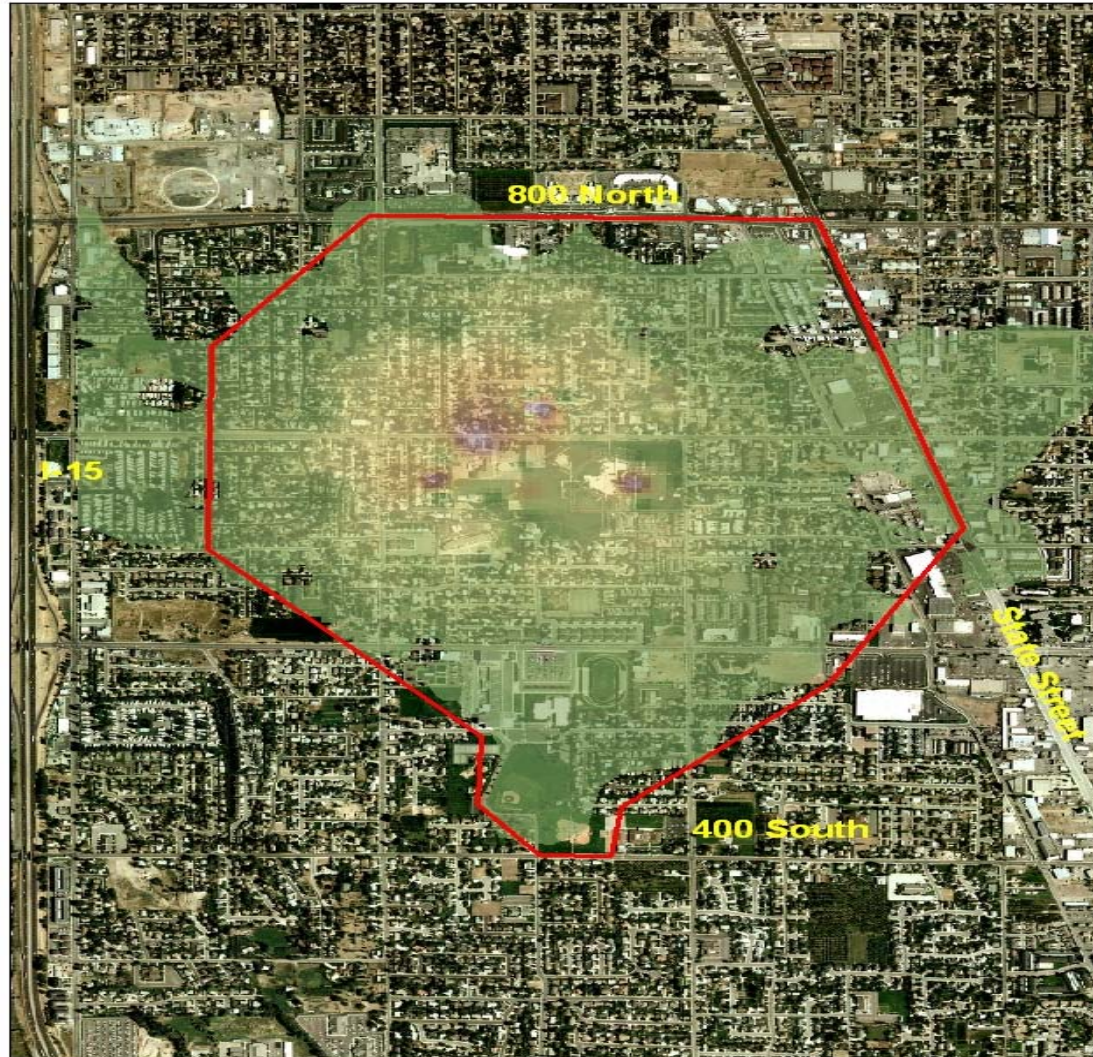
Total area 915.95 acres

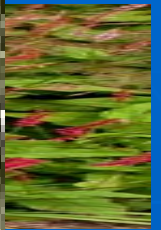


Map scale 1:20,000 (1 inch = 0.3 miles)



# Recommended Treatment Area - 2007









# Recommended Treatment Area - 2007

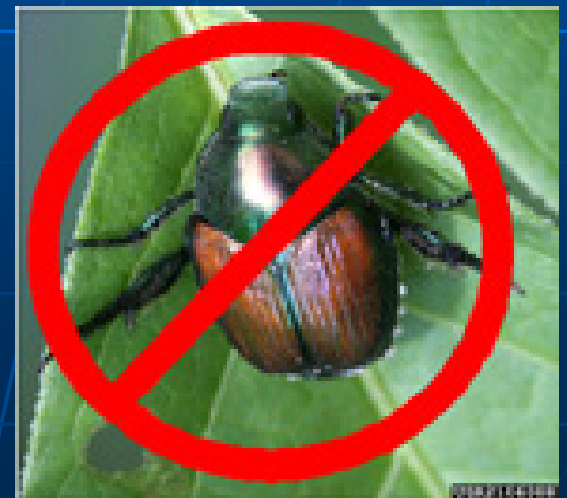


# Japanese Beetle Eradication

What needs to be done?

The beetles must be killed.

Eradication, not control.





# Japanese Beetle Eradication

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The beetles must be killed.

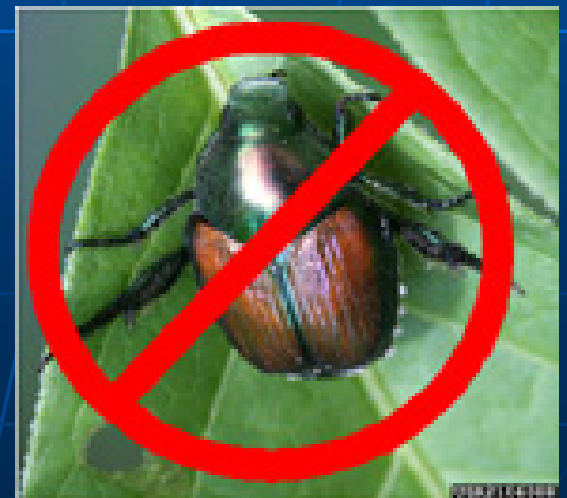
Eradication:

100 % treatment

Trapping

Altering green waste disposal,  
and yard care practices.

Other non-spraying steps.



# Japanese Beetle Eradication

What needs to be done?

Eradication = 100 % treatment

Control = Living with JB.

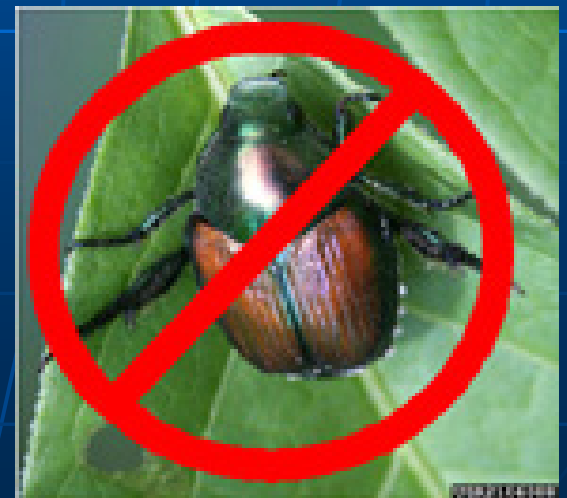
Methods:

Parasitic nematodes

Milky spore

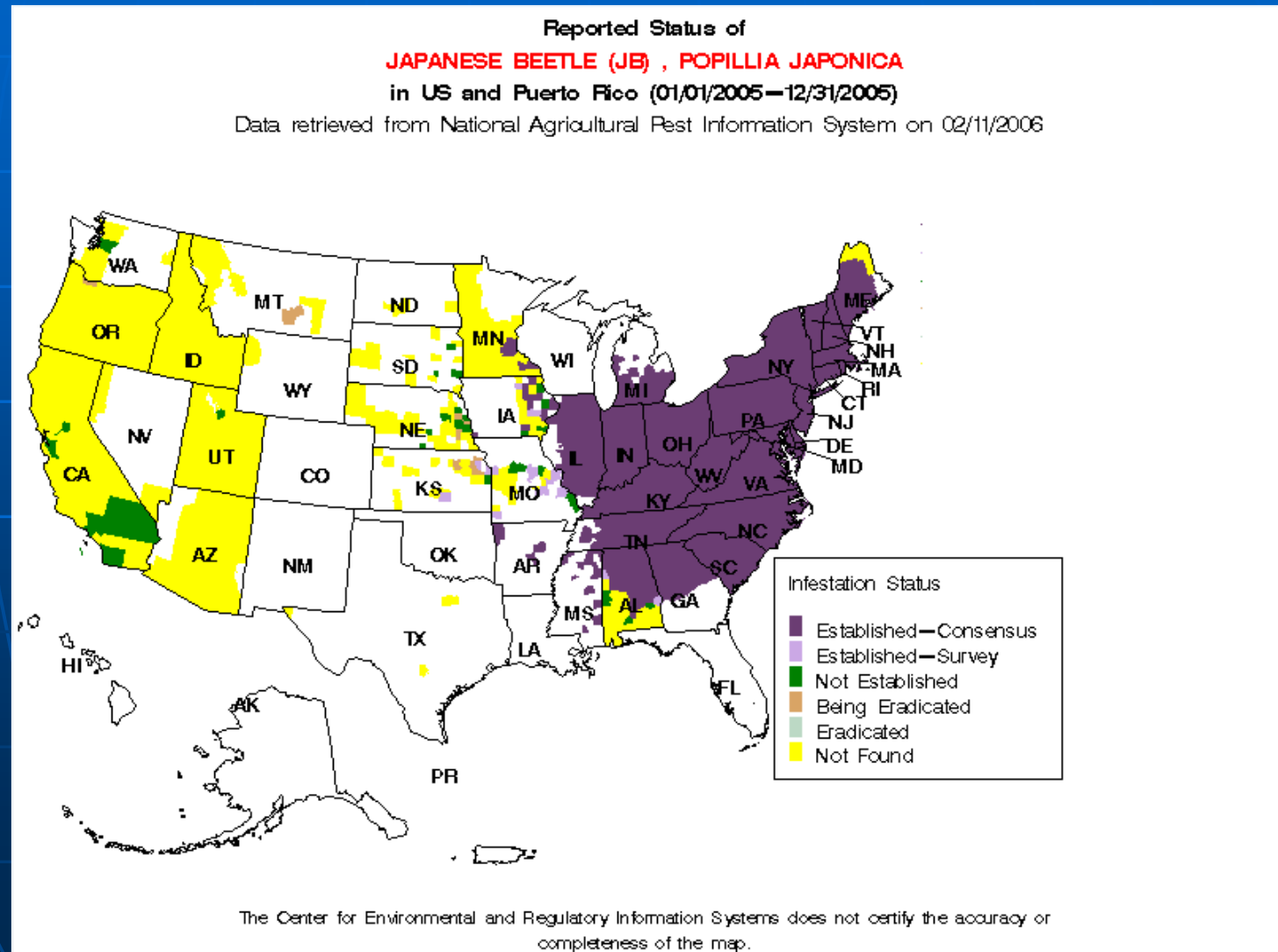
Bacteria and viruses

Induced drought





# Japanese Beetle Eradication



# Eradication Plan



This plan has worked in Oregon and other states.  
We believe it will work here...but we need your help  
to be successful.

If it doesn't work we will join several other Eastern  
states where people can't garden the way they used  
to.



# Eradication Plan



Our plan is patterned after three successful eradication efforts in Oregon, California and Nevada.

Oregon projects involved up to 500 homes.

Nevada involved 100 acres.

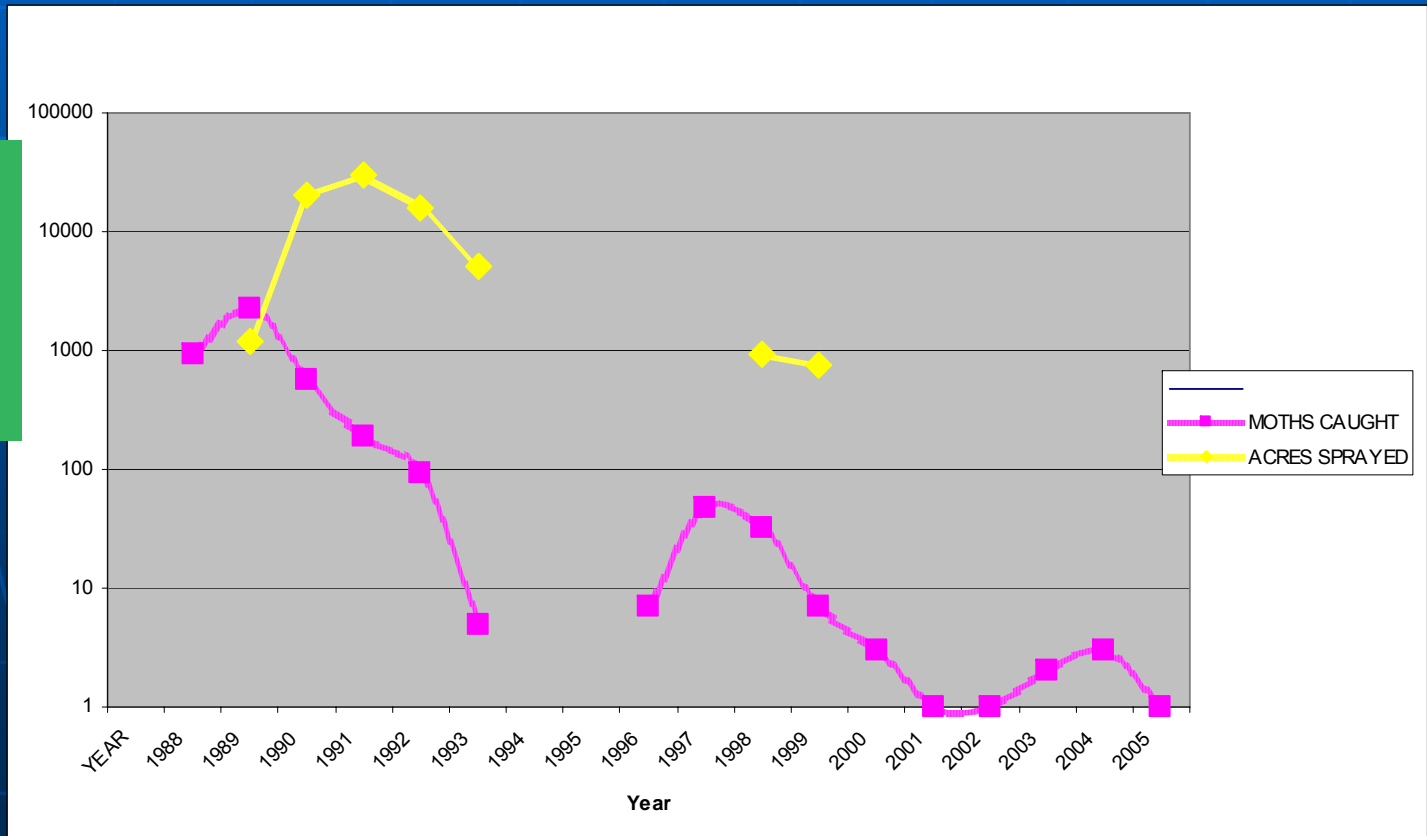
California/Oregon eradicates after one insect find.

No reported health problems with animals or humans.

# Past Performance

## Gypsy Moth Eradication

Past insect eradication program success.

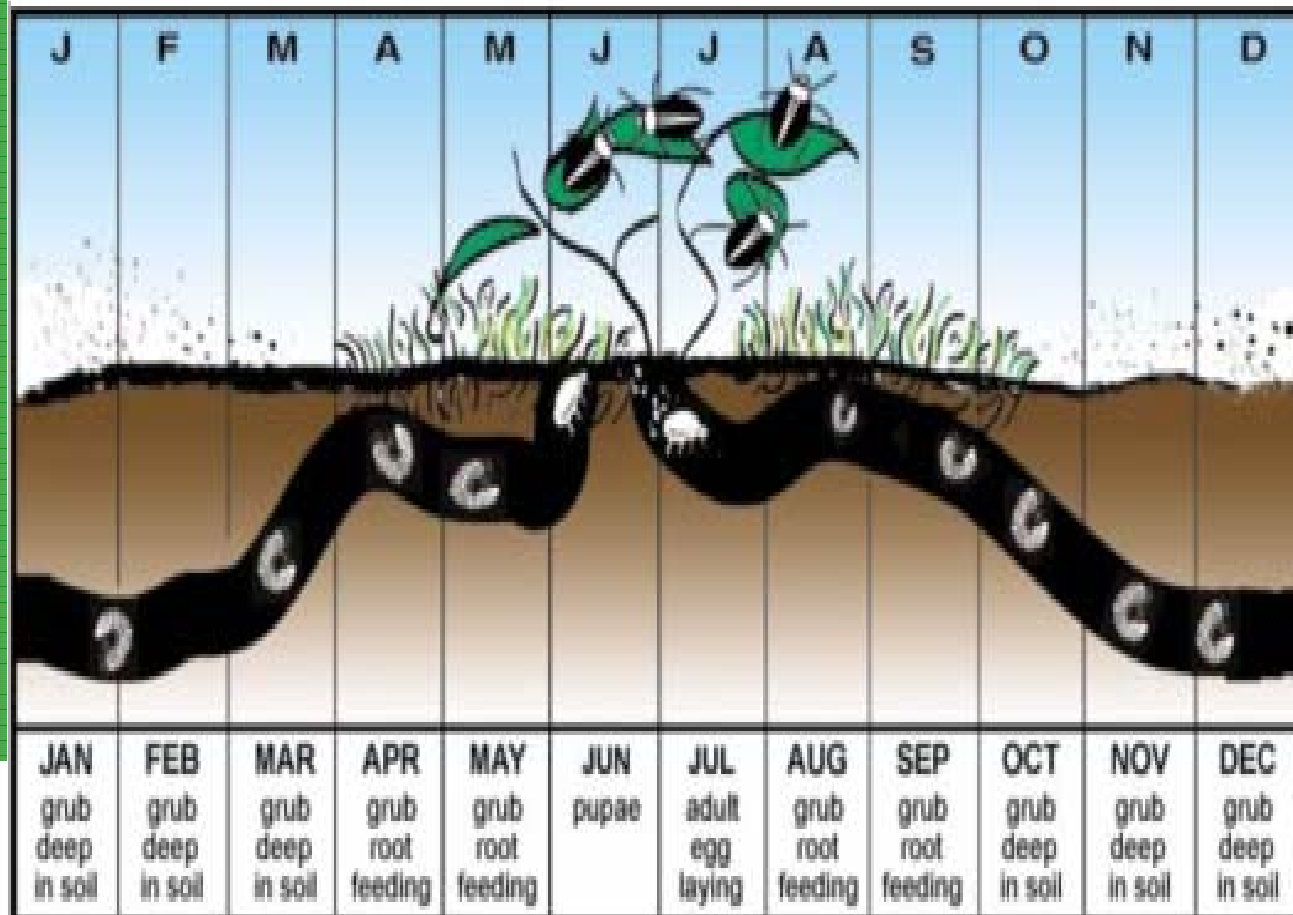




# Eradication Plan

We will attack them at two stages in their lives.

1. when they are in the ground
2. When they emerge and start eating green leafy material.



# Japanese Beetle Eradication

Ground application in early June.

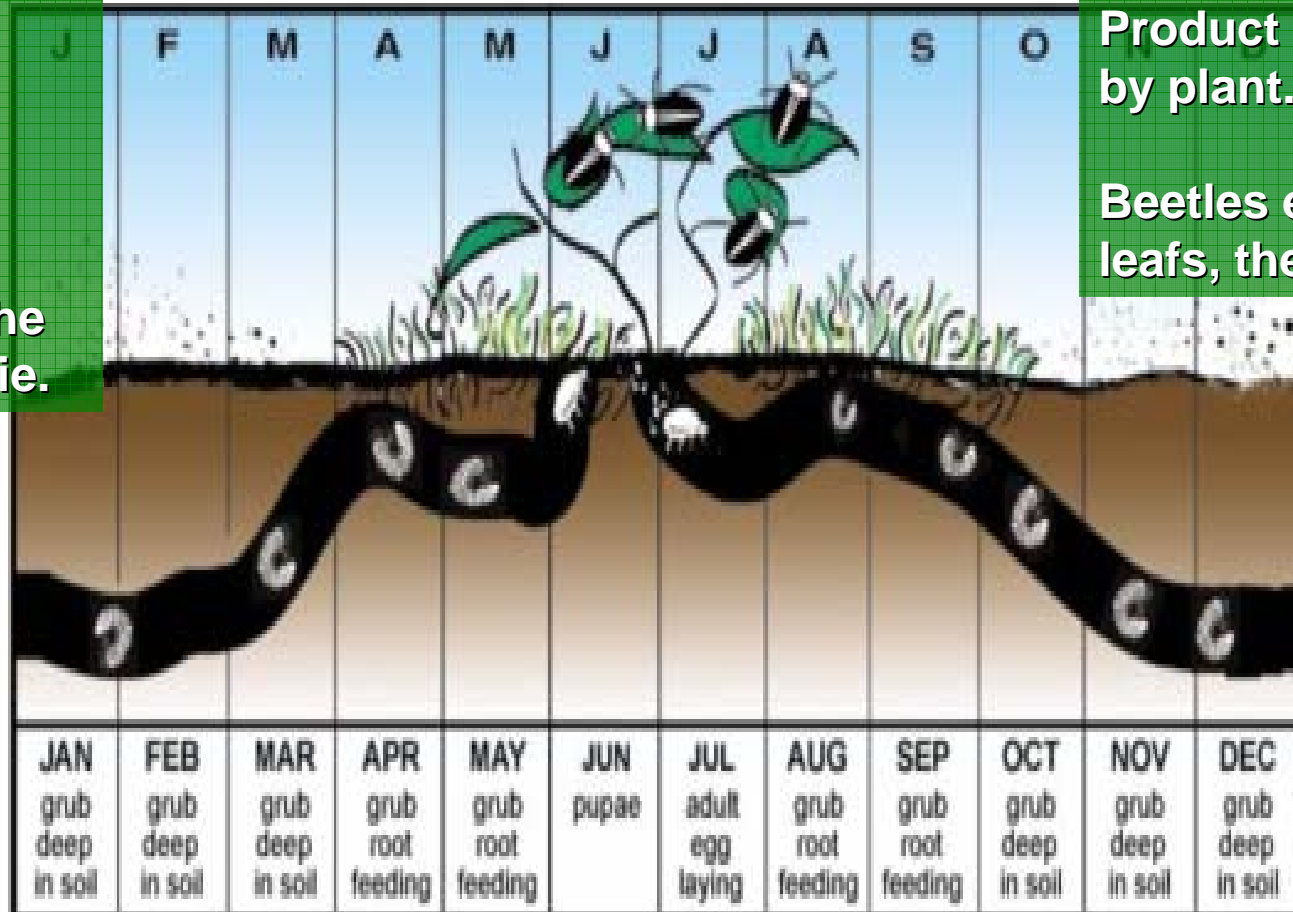
Product absorbed by grass.

Beetles eat the roots, then die.

Green leafy application in July.

Product absorbed by plant.

Beetles eat the leaves, then die.





# Eradication Plan

Spraying conducted by licensed, bonded, insured and certified applicators. They will apply the insecticide Merit to the lawns, mulch, and planting beds and Tempo on trees and shrubs.



Lawn care professionals

# Eradication Plan

The products should dry and stick to the leaves quickly (1 to 12 hours). The material is engineered to not be flakey, or rub off easily.

It is eventually absorbed into the plants and breaks down in the soil. (48 - 190 days)



Lawn care professionals





# Eradication Plan





# Eradication

- UDAF views this infestation as an emergency
- To effectively eradicate this pest, a certified applicator will apply the insecticide.
- This treatment will take approximately one hour and you will receive a pre application notice informing you of the time, day and name of the applicator so that you may plan accordingly.
- This product is NOT considered harmful to humans or animals when applied according to label instructions.
- This plan has been successful elsewhere, when initiated early.
- The products are considered safe and effective, and are commonly used by lawn care professionals.
- This will need to occur once annually for three years (ground/turf application).

**The treatment is free of charge. Contact the UDAF if anyone tries to charge you for the treatment or sell you something.**

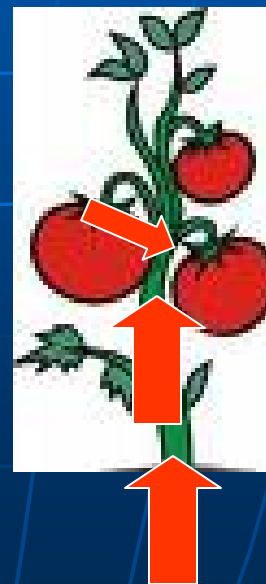
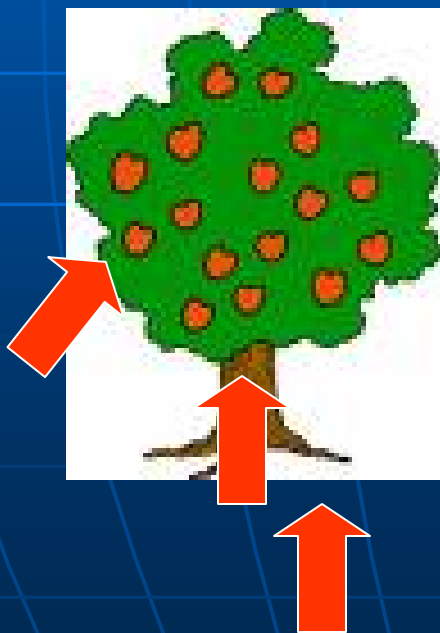
**801-538-7123.**



# Eradication Plan

The biology of how the plants absorb the insecticide is the reason we should not plant gardens.

Insecticide is taken up by the plant's roots and stored in the fruit and vegetable.



# Safety

Insecticide is taken up by the plant's roots and stored in the fruit and vegetable.

**Eating fruits and vegetables poses a health risk.**

**Substitute flower garden for vegetables during the treatment period.**







# Safety

- Free fruits & vegetables available through the Utah County Justice Center Garden.
- Produce from a 4-acre garden available for qualifying (lower income) families living in treatment area.
- USU Extension Service coordinating the program with the Utah County Food Coalition, the local food bank, and Neighborhoods in Action.

# Safety

What are the risks associated with these products?

Virtually zero. When applied properly.

“We support the planned insecticide application when the manufacturer’s recommended rate and safety precautions are followed by licensed personnel to protect the public health.”



Dr. Joseph Miner, MD, MSPH  
Utah County Health Department Executive Director



## UTAH COUNTY HEALTH DEPARTMENT

Joseph K. Miner, M.D., M.S.P.H.  
Executive Director

Ralph L. Clegg, E.H.S., M.P.A.  
Deputy Director

March 12, 2007

The Utah County Health Department has reviewed the Utah Department of Agriculture and Food plans to control the destructive Japanese Beetle. We support the planned insecticide application when the manufacturer's recommended rate and safety precautions are followed by licensed personnel to protect the public health.

Synthetic pyrethroid insecticide sprays are proposed to be applied under the direction of the Utah Department of Agriculture and Food to control the destructive Japanese Beetles discovered in Orem, Utah. These insecticides are considered quite safe once the spray has dried and it breaks down to an inactive chemical after a couple of weeks. These insecticides are similar to the insecticides used by Mosquito Abatement Services to control mosquitoes which spread West Nile Virus. Remaining indoors, closing windows, removing outdoor furniture and covering ornamental pools if they contain fish are the recommended precautions to follow on the day the spray is applied.

The imidacloprid insecticide which is proposed to be applied to lawns and gardens to control larvae in the soil can persist in plant products for about one year, so no produce should be consumed from plants growing in treated areas. Fruits and vegetables growing in treated soils should not be consumed until one year after the last application of this insecticide.



Dr. Joseph Miner, MD, MSPH  
Utah County Health Department Executive Director

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# Notification & Access



State of Utah

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Department of Agriculture and Food  
LEONARD M. BLACKHAM  
Commissioner

## ADVANCE NOTIFICATION OF INSECTICIDE TREATMENT - FOLIAGE

An infestation of Japanese beetle has been found in your immediate neighborhood. UDAF views this infestation as an emergency and in order to effectively eradicate this pest, it will be necessary for a licensed, bonded, insured and certified applicator to apply the insecticide Tempo SC Ultra to trees, woody and herbaceous ornamentals, and other foliage on your property. This insecticide will control Japanese beetle larva that are feeding on the roots of your plants. This treatment will take approximately one hour and you will receive a pre application notice informing you of the time, day and name of the applicator so that you may plan accordingly. This product contains B-Cyfluthrin and is not Harmful to Humans or Animals and the product will be applied according to label specifications. This insecticide is a safe and effective product that is commonly used by lawn care professionals. This will need to occur once annually for three years.

The treatment is free of charge.

You will receive a Pre-Treatment Notice that will notify you of the time we will need access.

This constitutes permission to enter your premises and apply this pesticide for the purpose of treating and eradicating the Japanese beetle infestation.

Name \_\_\_\_\_

Signature \_\_\_\_\_

My Address \_\_\_\_\_

Phone \_\_\_\_\_

Date \_\_\_\_\_

We would be happy to answer any questions you have about Tempo SC Ultra by calling (801) 538-4912 or by visiting: <http://ag.utah.gov/pressrel/JBMeetings.html>



150 North Redwood Road, PO Box 146500, Salt Lake City, UT 84114-6500  
telephone 801-538-7100 • fax/telex 801-538-7126 • <http://www.ag.utah.gov>

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where ideas connect



State of Utah

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Governor

GARY R. HERBERT  
Lieutenant Governor

Department of Agriculture and Food  
LEONARD M. BLACKHAM  
Commissioner

## ADVANCE NOTIFICATION OF INSECTICIDE TREATMENT - TURF

An infestation of Japanese beetle has been found in your immediate neighborhood. UDAF views this infestation as an emergency and in order to effectively eradicate this pest, it will be necessary for a licensed, bonded, insured and certified applicator to apply the insecticide Merit 2F to turf, mulch, and planting beds on your property. This insecticide will control Japanese beetle larva that are feeding on the roots of your plants. This treatment will take approximately one hour and you will receive a pre application notice informing you of the time, day and name of the applicator so that you may plan accordingly. This product contains Imidacloprid and is not Harmful to Humans or Animals and the product will be applied according to label specifications. This insecticide is a safe and effective product that is commonly used by lawn care professionals. This will need to occur once annually for three years.

The treatment is free of charge.

You will receive a Pre-Treatment Notice that will notify you of the time we will need access.

This constitutes permission to enter your premises and apply this pesticide for the purpose of treating and eradicating the Japanese beetle infestation.

Name \_\_\_\_\_

Signature \_\_\_\_\_

My Address \_\_\_\_\_

Phone \_\_\_\_\_

Date \_\_\_\_\_

We would be happy to answer any questions you have about Merit 2F by calling (801) 538-4912 or by visiting: <http://ag.utah.gov/pressrel/JBMeetings.html>



150 North Redwood Road, PO Box 146500, Salt Lake City, UT 84114-6500  
telephone 801-538-7100 • fax/telex 801-538-7126 • <http://www.ag.utah.gov>

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where ideas connect

Forms available





# Timeline

March 15, 20, and 22 : Neighborhood meetings.

March – April – May: Notification/Access slip signing period and public outreach.

Mid -June: Ground treatment in designated ground treatment area.

Late June to early July: Two treatments to green plants and trees in the designated plant and tree treatment area.



# What to do now

- Determine whether your property falls within the treatment boundaries.
- Sign and return the notification/access slips
- Substitute flowers or other cover crops for food producing plants and trees in your garden for the 3 year treatment period
- Do not aerate or power rake lawns in treatment areas
- Bag ALL soil, root balls, and sod waste and send to landfill.
- For above ground green waste adhere to Orem City's recommendations –<http://orem.org>

**(copies available here)**



# What to do now

## Changes in Orem City's Green Waste Collection Program to Combat the Japanese Beetle

- Soil, root balls, and sod need to be disposed of in the landfill throughout the entire year. These items should be bagged and placed in garbage cans.
- Prior to May 15th or following September 15th lawn clippings, tree trimmings, foliage and other above ground green waste can be disposed of in the normal manner.
- Between May 15th and September 15th all green waste must be bagged and disposed of in the landfill.
- The State has a limited number of plastic bags available for use by those in the impacted area.





# Japanese Beetle Eradication Orem City



## 2006 Timeline

- July 2006 - Japanese beetle found in Orem City by a master gardener
- July to August 2006 - Extensive trapping to discover extent of the beetles
- September 2006 - Generate map of the beetle population and plan treatments

## Contacts

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Agriculture and Food  
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roshea@utah.gov

Adrian Hinton  
Utah County  
Extension  
(801)851-8460  
adrianh@ext.usu.edu

Joyce Johnson  
Neighborhoods in  
Action  
(801)361-8555  
jwjohanson@orem.org

## 2007 Action Plan

- March 15, 20, and 22 – Neighborhood meetings in Orem City
- March – May – Permission slip signing period and public outreach
- Mid-June – Ground treatment in designated ground treatment area
- Late June – Early July – Two treatments to green plants and trees in the designated plant and tree treatment area



## Japanese Beetle and the Homeowner

- Determine whether your property falls within the treatment boundaries
- Sign and return the permission slips
- Substitute flowers or other cover crops for food producing plants and trees in your garden for the 3 year treatment period
- Do not aerate or power rake lawns in treatment areas
- Bag ALL below ground green waste and send to landfill
- For above ground green waste adhere to Orem City's recommendations – <http://orem.org>





# Insect Emergency

What are our choices?

1. Voluntary participation to stop the beetle now.
2. Let the infestation grow and force an emergency declaration.





# Insect Emergency

This is a true insect emergency

The Actions we take now will impact all of Utah

# Eradication Plan



This plan has worked in Oregon and other states.  
We believe it will work here...but we need your help  
to be successful.



# Japanese Beetle Eradication

The Japanese beetle is one of the two most destructive insects in the U.S.





# Insect Emergency

## Utah Agricultural Code -- 4-35-1 Insect Infestation Emergency Control Act

(1) (a) The commissioner, with the consent of the governor, may declare that an insect infestation emergency situation exists which jeopardizes property and resources, and designate the area or areas affected.

(2) The Commissioner is authorized...to direct all emergency measures... considered necessary to alleviate the condition.